JOURNAL OF STATISTICAL PHYSICS

Vol. 94, Nos. 1/2 January 1999

CONTENTS

ARTICLES

Universal Large-Deviation Function of the Kardar–Parisi–Zhang Equation in One Dimension 1
B. Derrida and C. Appert

Predicting Fiber Contact in a Three-Dimensional Model of Paper 31
D. J. Gates and M. Westcott

Mean-Field Theory for Percolation Models of the Ising Type 53
L. Chayes, A. Coniglio, J. Machta, and K. Shtengel

Correlation Functions by Cluster Variation Method for Ising Model with NN, NNN, and Plaquette Interactions 67
E. N. M. Cirillo, G. Gonnella, M. Troccoli, and A. Maritan

Equidistribution of Random Walks on Spheres 91
D. Bertacchi and F. Zucca

The Temperature Zero Limit 113
Joel Feldman, Horst Knörrer, Manfred Salmhofer, and Eugene Trubowitz

Infinite Prandtl Number Convection 159
Peter Constantin and Charles R. Doering

Analytical and Numerical Studies of the One-Dimensional Spin Facilitated Kinetic Ising Model 173
Michael Schulz and Steffen Trimper

Diffusion Lattice Boltzmann Scheme on a Orthorhombic Lattice 203
R. G. M. van der Sman and M. H. Ernst

Mutual Annihilation of Two Diffusing Particles in One- and Two-Dimensional Lattices 219
Claude Aslangul

SHORT COMMUNICATIONS

An Approximate KAM-Renormalization-Group Scheme for Hamiltonian Systems 241
C. Chandre, H. R. Jauslin, and G. Benfatto

Minimum Entropy Production of Neutrino Radiation in the Steady State 253
Christopher Essex and Dallas C. Kennedy

DEPARTMENTS

Book Review: *Master of Modern Physics: The Scientific Contributions of H. A. Kramers* 269
Paul H. E. Meijer

Future Contributions to *Journal of Statistical Physics* 275

JOURNAL OF STATISTICAL PHYSICS

Vol. 94, Nos. 3/4 February 1999

CONTENTS

ARTICLES

The Genealogical Tree of a Chromosome 277
B. Derrida and B. Jung-Muller

An Equilibrium Lattice Model of Wetting on Rough Substrates 299
C. Borgs, J. DeConinck, and R. Kotecký

The Ising Model on a Quenched Ensemble of $c = -5$ Gravity Graphs 321
K. N. Anagnostopoulos, P. Bialas, and G. Thorleifsson

On the Relation Between Orthogonal, Symplectic and Unitary Matrix Ensembles 347
Harold Widom

A Quantum Crystal with Multidimensional Anharmonic Oscillators 365
William G. Faris and Robert A. Minlos

Non-Abelian Random Polygons: A New Model in Statistical Physics 389
Wim Schoenmaker and Wim Magnus

Nonmonotonic Behavior in Hard-Core and Widom–Rowlinson Models 415
Graham R. Brightwell, Olle Häggström, and Peter Winkler

Recurrence Times in Quasi-Periodic Motion: Statistical Properties, Role of Cell Size, Parameter Dependence 437
M. Theunissen, C. Nicolis, and G. Nicolis

Persistent Random Walks in Stationary Environment 469
S. Alili

Some Properties of k-Step Exclusion Processes 495
H. Guiol

Decay of Correlations and Dispersing Billiards 513
N. Chernov

Fokker–Planck Equation, Molecular Friction, and Molecular Dynamics for Brownian Particle Transport near External Solid Surfaces 557
Michael H. Peters

Simulation of Stochastic Differential Equations Through the Local Linearization Method. A Comparative Study 587
J. C. Jimenez, I. Shoji, and T. Ozaki

On the Rate of Entropy Production for the Boltzmann Equation 603
Alexander V. Bobylev and Carlo Cercignani

Probability Metrics and Uniqueness of the Solution to the Boltzmann Equation for a Maxwell Gas 619
G. Toscani and C. Villani

Analytic Solutions for Asymmetric Model of a Rod in a Lattice Fluid 639
Effat A. Saied and Reda G. Abd El-Rahman

Hydrodynamic Limit of Brownian Particles Interacting with Short- and Long-Range Forces 653
Paolo Buttà and Joel L. Lebowitz

SHORT COMMUNICATIONS

Simple Random Walks on Tori 695
Ya. G. Sinai

Equilibrium Pure States and Nonequilibrium Chaos 709
C. M. Newman and D. L. Stein

Future Contributions to *Journal of Statistical Physics* 723

JOURNAL OF STATISTICAL PHYSICS

Vol. 94, Nos. 5/6 March 1999

CONTENTS

ARTICLES

Multifractal Statistics of Mesoscopic Systems 725
A. Bershadskii

The Stochastic Traveling Salesman Problem: Finite Size Scaling and the Cavity Prediction 739
Allon G. Percus and Olivier C. Martin

Dissipation Statistics of a Passive Scalar in a Multidimensional Smooth Flow 759
Andrea Gamba and Igor V. Kolokolov

Boundary Conditions for Scalar Conservation Laws from a Kinetic Point of View 779
A. Nouri, A. Omrane, and J. P. Vila

A Self-Consistent Ornstein–Zernike Approximation for the Random Field Ising Model 805
E. Kierlik, M. L. Rosinberg, and G. Tarjus

Neural Networks in Which Synaptic Patterns Fluctuate with Time 837
J. Marro, J. J. Torres, and P. L. Garrido

On the Specific Heat of Fermi–Pasta–Ulam Systems and Their Glassy Behavior 859
Andrea Carati and Luigi Galgani

Exponentially Long Equilibrium Times in a One-Dimensional Collisional Model of Classical Gas 871
Giancarlo Benettin, Poul Hjorth, and Paolo Sempio

Hydrodynamics for Quasi-Free Quantum Systems 893
Christian Maes and Wolfgang Spitzer

Interacting Quantum and Classical Continuous Systems I. The Piecewise Deterministic Dynamics 913
Ph. Blanchard and R. Olkiewicz

Interacting Quantum and Classical Continuous Systems II. Asymptotic Behavior of the Quantum Subsystem 933
Ph. Blanchard and R. Olkiewicz

Liquid–Vapor Phase Transitions for Systems with Finite-Range Interactions 955
J. L. Lebowitz, A. Mazel, and E. Presutti

SHORT COMMUNICATIONS

The Distribution of the First Return Time for Rational Maps 1027
Nicolai Haydn

Decay of the Two-Point Function in One-Dimensional $O(N)$ Spin Models with Long-Range Interactions 1037
Herbert Spohn and Wilhelm Zwerger

Symmetry Relations for the Six-Vertex Model 1045
Greg I. Watson

DEPARTMENTS

Book Review: *Modern Thermodynamics: From Heat Engines to Dissipative Structures* 1055
Irwin Oppenheim
Book Review: *Statistical Physics of Fracture and Breakdown in Disordered Systems* 1057
Muhammad Sahimi
Program of the Fifth Statistical Physics Days 1061
Future Contributions to *Journal of Statistical Physics* 1065

JOURNAL OF STATISTICAL PHYSICS

Vol. 95, Nos. 1/2 April 1999

CONTENTS

ARTICLES

On the Stability of the $O(N)$-Invariant and the Cubic-Invariant Three-Dimensional N-Component Renormalization-Group Fixed Points in the Hierarchical Approximation 1
K. Pinn, M. Rehwald, and Chr. Wieczerkowski

Growth of Ordered Domains in a Computer Model Alloy with Lattice Misfit 23
P. Nielaba, P. Fratzl, and J. L. Lebowitz

Exact Solution of a Cellular Automaton for Traffic 45
M. R. Evans, N. Rajewsky, and E. R. Speer

Generalized von Smoluchowski Model of Reaction Rates, with Reacting Particles and a Mobile Trap 97
Aleksandar Donev, Jeff Rockwell, and Daniel ben-Avraham

Construction of BGK Models with a Family of Kinetic Entropies for a Given System of Conservation Laws 113
F. Bouchut

Persistence in Reaction-Diffusion Problems: I. Bosons 171
Michael J. Stephen and Robin B. Stinchcombe

Stochastic Symmetry-Breaking in a Gaussian Hopfield Model 181
Anton Bovier, Aernout C. D. van Enter, and Beat Niederhauser

The Spectral Gap for the Kawasaki Dynamics at Low Temperature 215
N. Cancrini, F. Cesi, and F. Martinelli

Dynamical Localization II with an Application to the Almost Mathieu Operator 273
François Germinet

Computing the Topological Entropy for Piecewise Monotonic Maps on the Interval 287
Thomas Steinberger

Entropy Production in Nonlinear, Thermally Driven Hamiltonian Systems 305
Jean-Pierre Eckmann, Claude-Alain Pillet, and Luc Rey-Bellet

A Gallavotti–Cohen-Type Symmetry in the Large Deviation Functional for Stochastic Dynamics 333
Joel L. Lebowitz and Herbert Spohn

The Fluctuation Theorem as a Gibbs Property 367
Christian Maes

Smooth Dynamics and New Theoretical Ideas in Nonequilibrium Statistical Mechanics 393
David Ruelle

SHORT COMMUNICATIONS

An Example of Nonuniqueness for Solutions to the Homogeneous Boltzmann Equation 469
Bernt Wennberg

Radiative Transport in a Periodic Structure 479
Guillaume Bal, Albert Fannjiang, George Papanicolaou, and Leonid Ryzhik

Asymptotic Lower Bound for the Relative Disparities of Truncated-Path-Integral Partition Functions 495
Sidney Golden

DEPARTMENTS

Ising Cluster Kinetics at the Critical Point 503
Dietrich Stauffer and Iksoo Chang

Book Reviews: *Books on Complexity* 507
Sinisa Pajevic

Book Review: *Nonequilibrium Statistical Mechanics in One Dimension* 511
Josep M. Porra

Book Review: *Theoretical and Mathematical Models in Polymer Research, Modern Methods in Polymer Research and Technology* 513
Rudi Podgornik

Erratum 517
H. P. McKean

Program of the 1997 Statistical Mechanics and Related Topics Meeting 519

Future Contributions to *Journal of Statistical Physics* 523

JOURNAL OF STATISTICAL PHYSICS

Vol. 95, Nos. 3/4 May 1999

CONTENTS

ARTICLES

Hydrodynamics and Platoon Formation for a Totally Asymmetric Exclusion Model with Particlewise Disorder 525
Timo Seppäläinen and Joachim Krug

Biased Diffusion with Correlated Noise 569
H. K. Janssen and B. Schmittmann

A Note on Transience Versus Recurrence for a Branching Random Walk in Random Environment 587
F. den Hollander, M. V. Menshikov, and S. Yu. Popov

The Lyapunov Spectrum for Conformal Expanding Maps and Axiom-A Surface Diffeomorphisms 615
Howard Weiss

Collision Integrals for Attractive Potentials 633
Alexander V. Bobylev and Reinhard Illner

Random Analytic Chaotic Eigenstates 651
P. Lebœuf

Multiscale Formalism for Correlation Functions of Fermions. Infrared Analysis of the Tridimensional Gross–Neveu Model 665
Emmanuel Pereira, Aldo Procacci, and Michael O'Carroll

Analyticity in Hubbard Models 693
Daniel Ueltschi

Existence of Delaunay Pairwise Gibbs Point Process with Superstable Component 719
Etienne Bertin, Jean-Michel Billiot, and Rémy Drouilhet

Asymptotic Expansion of the Pressure in the Inverse Interaction Range 745
I. Merola

SHORT COMMUNICATIONS

Two-Dimensional Dilute Ising Models: Critical Behavior near Defect Lines 759
Ferenc Szalma and Ferenc Iglói

Branched Polymers on the Two-Dimensional Square Lattice with Attractive Surfaces 767
Dragan Vujić

Anomalous Fermions 775
B. G. Sidharth

Weakly Gibbsian Measures and Quasilocality: A Long-Range Pair-Interaction Counterexample 785
R. Lefevere

The Entropy Formula for SRB-Measures of Lattice Dynamical Systems 791
Miaohua Jiang

DEPARTMENTS

Book Review: *The Self-Avoiding Walk* 805
Frank den Hollander

Book Review: *Nonequilibrium Statistical Mechanics. Ensemble Method* 811
Leopoldo Garcia Colin Scherer

Program of the 80th Statistical Mechanics Meeting, Rutgers University, December 13–15, 1998 815

Future Contributions to *Journal of Statistical Physics* 823

JOURNAL OF STATISTICAL PHYSICS

Vol. 95, Nos. 5/6 June 1999

CONTENTS

ARTICLES

Dedication 825
Jim Langer, Joel L. Lebowitz, Oliver Penrose, and Jean Taylor

Symmetries of Quasicrystals 827
Charles Radin

Classical Lattice-Gas Models of Quasicrystals 835
Jacek Miękisz

The Equations of Ostwald Ripening for Dilute Systems 851
Nicholas D. Alikakos and Giorgio Fusco

Non-Self-Similar Behavior in the LSW Theory of Ostwald Ripening 867
Barbara Niethammer and Robert L. Pego

Homogeneous Nucleation 903
J. D. Gunton

Monte Carlo Simulations for Spinodal Decomposition 925
Evelyn Sander and Thomas Wanner

Kinetics of Phase Ordering on Curved Surfaces 949
Oliver Schoenborn and Rashmi C. Desai

Phase Transitions in a Driven Lattice Gas with Anisotropic Interactions 981
L. B. Shaw, B. Schmittmann, and R. K. P. Zia

Wetting-Induced Aggregation of Colloids 997
D. Beysens and T. Narayanan

Wetting of Alkanes on Water from a Cahn-Type Theory: Effects of Long-Range Forces 1009
Joseph O. Indekeu, Karine Ragil, Daniel Bonn, Daniel Broseta, and Jacques Meunier

Interfacial Profiles Between Coexisting Phases in Thin Films: Cahn–Hilliard Treatment Versus Capillary Waves 1045
K. Binder, M. Müller, F. Schmid, and A. Werner

Algebraic Rate of Decay for the Excess Free Energy and Stability of Fronts for a Nonlocal Phase Kinetics Equation with a Conservation Law. I 1069
E. A. Carlen, M. C. Carvalho, and E. Orlandi

An Integrodifferential Model for Phase Transitions: Stationary Solutions in Higher Space Dimensions 1119
Peter W. Bates and Adam Chmaj

Developments in Phase-Field Modeling of Thermoelastic and Two-Component Materials 1141
Ch. Charach, C. K. Chen, and P. C. Fife

Singular Limit of a Reaction-Diffusion Equation with a Spatially Inhomogeneous Reaction Term 1165
K.-I. Nakamura, H. Matano, D. Hilhorst, and R. Schätzle

Equations with Singular Diffusivity 1187
R. Kobayashi and Y. Giga

A Variational Approach to Crystalline Triple-Junction Motion 1221
Jean E. Taylor

Cahn–Hoffman ξ-Vector and Its Relation to Diffuse Interface Models of Phase Transitions 1245
A. A. Wheeler

Interfacial Stress, Interfacial Energy, and Phase Equilibria in Binary Alloys 1281
William C. Johnson and P. W. Voorhees

Dynamics of Faceted Grain Boundary Grooves 1311
J. G. Dash, V. A. Hodgkin, and J. S. Wettlaufer

Continuous Displacement Formulation of Alloys 1323
Ryoichi Kikuchi

Anisotropy of Interfaces in an Ordered HCP Binary Alloy 1337
J. W. Cahn, S. C. Han, and G. B. McFadden

Coherent Solid-State Phase Transitions with Atomic Diffusion: A Thermomechanical Treatment 1361
Eliot Fried and Morton E. Gurtin

Modeling of Phase Separation in Alloys with Coherent Elastic Misfit 1429
Peter Fratzl, Oliver Penrose, and Joel L. Lebowitz

Future Contributions to *Journal of Statistical Physics* 1505

JOURNAL OF STATISTICAL PHYSICS

Vol. 96, Nos. 1/2 July 1999

CONTENTS

ARTICLES

Determinants of Airy Operators and Applications to Random Matrices 1
Estelle L. Basor and Harold Widom

Transition from the Compact to the Dense Phase of Two-Dimensional Polymers 21
Jesper Lykke Jacobsen and Jané Kondev

Polymer Gas Approach to N-Body Lattice Systems 49
Aldo Procacci and Benedetto Scoppola

The Restriction of the Ising Model to a Layer 69
C. Maes, F. Redig, and A. Van Moffaert

Variational Principle for Some Renormalized Measures 109
R. Lefevere

Statistical Entropy of a Lattice-Gas Model: Multiparticle Correlation Expansion 135
Santi Prestipino and Paolo V. Giaquinta

Diffusion of a Test Chain in a Quenched Background of Semidilute Polymers 169
Stefan Müller

The Computational Complexity of Sandpiles 205
Cristopher Moore and Martin Nilsson

Entropy Production: From Open Volume-Preserving to Dissipative Systems 225
T. Gilbert and J. R. Dorfman

A Semiclassical Theory of a Dissipative Henon–Heiles System 271
Bidhan Chandra Bag and Deb Shankar Ray

Continuum Field Model of Driven Lattice Gases 303
F. de los Santos and P. L. Garrido

Stochastic One-Dimensional Lorentz Gas on a Lattice 325
E. Barkai and V. Fleurov

Existence of Solutions of a Kinetic Equation Modeling Cometary Flows 361
Pierre Degond, José L. López, Frédéric Poupaud, and Christian Schmeiser

Stationary Scattering Theory for a Charged Particles Transport Problem 377
G. Busoni and H. Emamirad

SHORT COMMUNICATIONS

Some Results on Sinai Diffusion 403
Michael J. Stephen

Microscopic Analysis of Clausius–Duhem Processes 415
C. Jarzynski

On Percolation with Fibers or Layers 429
André Toom

On Relativistic Collisional Invariants 439
C. Cercignani and G. M. Kremer

Spatial Statistics of Stochastic Fiber Networks 447
C. T. J. Dodson and W. W. Sampson

Future Contributions to *Journal of Statistical Physics* 459

JOURNAL OF STATISTICAL PHYSICS

Vol. 96, Nos. 3/4 August 1999

CONTENTS

ARTICLES

Antiferromagnetic Potts Models on the Square Lattice: A High-Precision Monte Carlo Study 461
Sabino José Ferreira and Alan D. Sokal

Interfacial Adsorption in Two-Dimensional Potts Models 531
E. Carlon, F. Iglói, W. Selke, and F. Szalma

Effective Hamiltonians and Phase Diagrams for Tight-Binding Models 545
Nilanjana Datta, Roberto Fernández, and Jürg Fröhlich

Reduction Formula for Fermion Loops and Density Correlations of the 1D Fermi Gas 613
Arne Neumayr and Walter Metzner

Quantum and Classical Evolutions of a Nonautonomous Dynamical System—A Comparison 627
Gunther Karner

Onsager Symmetry from Microscopic *TP* Invariance 639
D. Gabrielli, G. Jona-Lasinio, and C. Landim

Navier–Stokes Limit for a Thermal Stochastic Lattice Gas 653
O. Benois, R. Esposito, and R. Marra

Multiscale Analysis for Interacting Particles: Relaxation Systems and Scalar Conservation Laws 715
Markos A. Katsoulakis and Athanasios E. Tzavaras

Conservation of Energy, Entropy Identity, and Local Stability for the Spatially Homogeneous Boltzmann Equation 765
Xuguang Lu

Probability Densities for Noisy Delay Bifurcations 797
R. Kuske

Field Theory of Critical Behavior in Driven Diffusive Systems with Quenched Disorder 817
V. Becker and H. K. Janssen

Parallel Dynamics of Extremely Diluted Symmetric *Q*-Ising Neural Networks 861
D. Bollé, G. Jongen, and G. M. Shim

The Geometry of a Parameter Space of Interacting Particle Systems 883
Christoph Bandt

SHORT COMMUNICATION

Statistical Mechanics Approach to Coding Theory 907
A. Procacci and B. Scoppola

Future Contributions to *Journal of Statistical Physics* 913

JOURNAL OF STATISTICAL PHYSICS

Vol. 96, Nos. 5/6 September 1999

CONTENTS

ARTICLES

Renormalization Group for Strongly Coupled Maps 915
Anaël Lemaître and Hugues Chaté

Statistics of Persistent Events in the Binomial Random Walk: Will the Drunken Sailor Hit the Sober Man? 963
M. Bauer, C. Godrèche, and J. M. Luck

Non-ergodicity of Two Particles Interacting via a Smooth Potential 1021
Victor J. Donnay

Spouge's Conjecture on Complete and Instantaneous Gelation 1049
Intae Jeon

Two-Dimensional Potts Model and Annular Partitions 1071
C. King

Diamond Ice 1091
Kari Eloranta

Statistical Geometry and Lattices 1111
Gerardo Soto-Campos, Richard Bowles, Andrey Itkin, and Howard Reiss

Goldstone Boson Normal Coordinates in Interacting Bose Gases 1125
T. Michoel and A. Verbeure

Coulomb Systems at Low Density: A Review 1163
David C. Brydges and Ph. A. Martin

SHORT COMMUNICATIONS

Existence of a Constant for Finite System Extinction 1331
T. S. Mountford

Note on Two Theorems in Nonequilibrium Statistical Mechanics 1343
E. G. D. Cohen and G. Gallavotti

A Remark on the Kramers Problem 1351
Alex A. Samoletov

A Variational Principle for Markov Processes 1359
Jinwen Chen

Future Contributions to *Journal of Statistical Physics* 1365

JOURNAL OF STATISTICAL PHYSICS

Vol. 97, Nos. 1/2 October 1999

CONTENTS

ARTICLES

Spontaneous Breaking of Translational Invariance and Spatial Condensation in Stationary States on a Ring. I. The Neutral System 1
Peter F. Arndt, Thomas Heinzel, and Vladimir Rittenberg

The Swendsen–Wang Process Does Not Always Mix Rapidly 67
Vivek K. Gore and Mark R. Jerrum

On the Ising Model with Strongly Anisotropic External Field 87
F. R. Nardi, E. Olivieri, and M. Zahradnik

Uniqueness of Gibbs State for Nonideal Gas in $\mathbb{R}^d$: The Case of Pair Potentials 145
E. Pechersky and Yu. Zhukov

Classical and Quantum Algebraic Screening in a Coulomb Plasma near a Wall: A Solvable Model 173
J. N. Aqua and F. Cornu

Parking Cars with Spin but no Length 209
Yoshiaki Itoh and Larry Shepp

Long- and Short-Range Correlations in Genome Organization 233
Y. Almirantis and A. Provata

Renewal Sequences and Intermittency 263
Stefano Isola

Kinetic Models for Granular Flow 281
J. Javier Brey, James W. Duffy, and Andres Santos

One-Dimensional Diffusion in a Semiinfinite Poisson Random Force 323
Petr Chvosta and Noëlle Pottier

Biased Diffusion in a One-Dimensional Adsorbed Monolayer 351
O. Bénichou, A. M. Cazabat, A. Lemarchand, M. Moreau, and G. Oshanin

A Two-Parametric Family of Asymmetric Exclusion Processes and Its Exact Solution 373
M. Alimohammadi, V. Karimipour, and M. Khorrami

On the Behavior of Solutions of a Class of Nonlinear Partial Differential Equations 395
H. I. Abdel-Gawad

On the Spread of Drug-Resistant Diseases 409
Rinaldo B. Schinazi

DEPARTMENTS

Book Review: *Classical and Quantum Dynamics in Condensed Phases Simulations* 419
Dominique Bicout

Program of the 81st Statistical Mechanics Meeting 421

Future Contributions to *Journal of Statistical Physics* 427

JOURNAL OF STATISTICAL PHYSICS

Vol. 97, Nos. 3/4 November 1999

CONTENTS

ARTICLES

Analysis of a Population Genetics Model with Mutation, Selection, and Pleiotropy 429
S. N. Coppersmith, Robert D. Blank, and Leo P. Kadanoff

The Response of Glassy Systems to Random Perturbations: A Bridge Between Equilibrium and Off-Equilibrium 459
Silvio Franz, Marc Mézard, Giorgio Parisi, and Luca Peliti

Exact Finite-Size Study of the 2D OCP at $\Gamma = 4$ and $\Gamma = 6$ 489
G. Téllez and P. J. Forrester

A Fully Magnetizing Phase Transition 523
Pierluigi Contucci, Peter Kleban, and Andreas Knauf

The Renormalization Group and Its Finite Lattice Approximations 541
Angelo Cacciuto, Eric Gregory, and Alex Travesset

Propagation and Organization in Lattice Random Media 575
Patrick Grosfils, Jean Pierre Boon, E. G. D. Cohen, and L. A. Bunimovich

Large Fluctuations in Multiattractor Systems and the Generalized Kramers Problem 609
S. M. Soskin

Discrete Velocity Models Without Nonphysical Invariants 677
Alexander V. Bobylev and Carlo Cercignani

Analysis and Experiments for a Computational Model of a Heat Bath 687
A. M. Stuart and J. O. Warren

Poissonian Obstacles with Gaussian Walls Discriminate Between Classical and Quantum Lifshits Tailing in Magnetic Fields 725
Thomas Hupfer, Hajo Leschke, and Simone Warzel

Global C^*-Dynamics and Its KMS States of Weakly Inhomogeneous Bipolaronic Superconductors 751
Thomas Gerisch, Roland Münzner, and Alfred Rieckers

Intrinsic Randomness of Kolmogorov $\mathbb{Z}^d$-Actions on a Lebesgue Space 781
M. Courbage and B. Kamiński

SHORT COMMUNICATIONS

Excluded Volume Effects for Frequency Moments of the Spin Autocorrelation Function of the Heisenberg Model on a Square Lattice at High Temperatures 793
V. E. Zobov and M. A. Popov

Critical Slowing Down on the Dynamics of a Bistable Reaction-Diffusion System in the Neighborhood of Its Critical Point 803
J. M. Reyes de Rueda, G. G. Izús, and C. H. Borzi

On the Asymptotic Convergence of the Transient and Steady-State Fluctuation Theorems 811
Gary Ayton and Denis J. Evans

Infinitely Many Contact Process Transitions on a Tree 817
Marcia Salzano

DEPARTMENTS

Book Review: *Thermodynamics of One-Dimensional Solvable Models* 827
Vladimir Korepin and C. N. Yang

Future Contributions to *Journal of Statistical Physics* 829

JOURNAL OF STATISTICAL PHYSICS

Vol. 97, Nos. 5/6 December 1999

CONTENTS

ARTICLES

Renormalization-Group Transformations Under Strong Mixing Conditions: Gibbsianness and Convergence of Renormalized Interactions 831
Lorenzo Bertini, Emilio N. M. Cirillo, and Enzo Olivieri

Absence of Transport Under a Slowly Varying Potential in Disordered Systems 917
Fumihiko Nakano and Masahiro Kaminaga

A Comparison Between Information-Theoretic and Phenomenological Descriptions of Nonequilibrium Radiation 941
J. Fort and P. Roura

Ergodic Properties for a Quantum Nonlinear Dynamics 957
Francesco Fidaleo and Carlangelo Liverani

Error Estimation in the Histogram Monte Carlo Method 1011
M. E. J. Newman and R. G. Palmer

DEPARTMENTS

Erratum: Mayer Expansions and the Hamiltonian-Jacobi Equation. II. Fermions, Dimensional Reduction Formulas 1027
J. D. Wright and David Brydges

Book Review: *Monte Carlo Methods in Statistical Physics* 1029
Philip G. McQueen

Book Review: *Cellular Automata Modeling of Physical Systems* 1031
Daniel ben-Avraham

Author Index for *Journal of Statistical Physics* (1999) 1033

Future Contributions to *Journal of Statistical Physics* 1045